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EXAMINER

GAGLIARDI, ALBERT J

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/238,501

Applicant(s)

HATA, FUMIO

Examiner

Albert J. Gagliardi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February and 08 July 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6-8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Comment on Submissions

1. The preliminary amendments filed 28 February and 8 July 2002 have been entered.

Election/Restriction

2. The examiner notes that independent claims 1, 11, and 20 are directed to at least three different species/combinations of inventions. Since the examiner does not consider that there is any patentable distinction between any of the inventions, no election requirement is being made at this time. Applicant should be aware that, depending on the course of future prosecution (future arguments and/or amendments) this view may change and an election could be required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Primary 102(e) Rejection

4. Claim 11 is rejected under 35 U.S.C. 102(e) as being anticipated by Crowell *et al.* (US 5,804,832).

Regarding claim 11, Crowell discloses (**Figs. 4-6**) an image pickup apparatus comprising a substrate (col. 4, lines 48-49); a photoelectric converter (22) having a plurality of photoelectric converters (26) formed on the substrate; a cabinet (13); and a shock absorber (44) disposed between the photoelectric converter (22) and the cabinet (13).

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Alternate 102(e) Rejection

5. Claim 11 is rejected under 35 U.S.C. 102(e) as being anticipated by Jeromin *et al.* (US 5,661,309).

Regarding claim 11, *Jeromin* discloses (Figs. 1, 5, 6) an image pickup apparatus comprising a substrate (12); a photoelectric converter (16) having a plurality of photoelectric converters formed on the substrate (12); a cabinet (20); and a shock absorber (25) disposed between the photoelectric converter (16) and the cabinet (20).

Regarding claim 18, *Jeromin* discloses the photoelectric converter apparatus includes a light receiving face (8) and the shock absorber (25) entirely covers the light receiving face (8).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Crowell et al.* (US 5,804,832).

Regarding claim 1, *Crowell* discloses a two-dimensional pickup apparatus comprising a cabinet (13) containing a substrate member and a photoelectric converter (22) having a light receiving surface comprising a plurality of photoelectric converters (26), the converter being arranged on a base member (44), the cabinet having a deformable top plate (38; col. 4, lines 35-38), the top plate being less rigid than the base member (44). The examiner notes that while *Crowell* does not specifically disclose the relative rigidity of the top plate in comparison to the

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base member, *Crowell* does disclose that the top plate is designed to permit some deflection (col. 4, lines 35-38), while the base member (44) is designed to be sufficiently thick to resist twisting and flexing (col. 5, lines 25-28).

Regarding claim 2, the top plate discloses by *Crowell* can return to an original position after deformation.

Regarding claim 3, although *Crowell* does not specifically disclose that the magnitude of the deformation of the top plate is greater than the substrate member, those skilled in the art would appreciate that such an arrangement would have been an obvious design choice, if not an inherent aspect of the device, in view of the top plate being deformable while the photoelectric converter unit, which includes a substrate made of glass (col. 4, lines 48-49), is described as needing physical protection. Therefore, absent some degree of criticality, it would have been an obvious to a person of ordinary skill in the art to modify the device, if not already inherent, such that the magnitude of the deformation of the top plate is more than the substrate in view of the desire for protection. The examiner further notes that in normal operation, the top plate is subjected to a load (i.e., a patient) wherein the substrate is not ordinarily subjected to such load or at least a lesser amount of load, such operation further suggesting the magnitude of the top plate is greater than that of the substrate.

Regarding claim 4, *Crowell* suggests a shock absorber (40) arranged between the photoelectric converter unit (22) and the cabinet (13).

Regarding claims 8 and 9, *Crowell* discloses that the top plate comprises carbon fiber reinforced resin.

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8. Claims 5-7 and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Crowell* as applied above, and further in view of *Turner* (GB 2 057 628 A).

Regarding claim 5, *Crowell* discloses that the shock absorbing members are made of rubber or similar flexible material. Regarding the shock absorber comprising one or more containers, those skilled in the art appreciate that a variety of functionally equivalent means are well known for the purpose of absorbing shock including fluid filled containers (see *Turner*, for example, at page 1, lines 7-20). As such the substitution of plurality of fluid filled contains for the plurality of rubber members would have been a matter of routine design choice in view of the known functional equivalence thereof.

Regarding claim 6, *Turner* discloses that the containers may be air bags (page 1, lines 14-18).

Regarding claim 7, the apparatus disclosed by *Crowell* and *Turner* includes circuit boards (*Crowell* - 48) and a liquid contained in a sealed state in the containers (suggestion of *Turner* page 1, line 18-20) in direct contact with the circuit boards, and depending on the desired arrangement, such containers also in contact with the electronic parts (see generally Figs. 5 and 6 of *Crowell*). Cooling is considered as an inherent aspect of the suggested structure.

Note: Apparatus claims must be structurally distinguishable from the prior art. Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). Apparatus claims cover what a device is, not what a device does. *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). See MPEP 2114.



Regarding claims 12-14, the apparatus suggested by *Crowell* and *Turner* (see explanation regarding claims 4-6 above) suggests that the shock absorbers may comprise air bags.

Regarding claims 15-16, the apparatus disclosed by *Crowell* and *Turner* (see explanation regarding claim 7 above) suggests circuit boards and liquid filled containers in contact with the electronic parts of the circuit boards.

Regarding claim 17, although not specifically suggested by *Crowell* and *Turner*, the substitution of gel for fluids such as air and liquids is well-known and considered functional equivalent design choice.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Crowell* as applied above, and further in view of *Jeromin* (US 5,381,014 A).

Regarding claim 10, *Crowell* discloses that the photoelectric converter may be of a type as disclosed by *Jeromin* (col. 4, lines 46-48) which suggests that the panels may optionally contain include a fluorescent body (col. 3, lines 49-51).

10. Claim 19 (according to its dependency) is rejected under 35 U.S.C. 103(a) as being unpatentable over *Crowell* and/or *Turner* and/or *Jeromin* applied above further in view of *Jeromin* (US 5,381,014 A).

Regarding claim 19, the inclusion of a fluorescent member would have been a matter of obvious design choice depending on the needs of the application (see explanation regarding claim 10 above).

11. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Jeromin* in view of *Jeromin* (US 5,381,014 A).

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Regarding claims 20-21, the apparatus as suggested by in view of *Jeromin* ('014) (see explanation regarding claims 10 and 19 above), suggests an apparatus comprising a cabinet containing a photoelectric converter having a plurality of photoelectric converters formed on a substrate, a fluorescent member (obvious modification), and a shock absorber covering the entire light receiving surface arranged between the fluorescent member and the cabinet.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert J. Gagliardi whose telephone number is (703) 305-0417.

The examiner can normally be reached on Monday thru Friday from 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (703) 308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Albert J. Gagliardi
Examiner
Art Unit 2878

AJG
May 15, 2003